

VII. *A Letter from Nathaniel Polhill, Esq. Member of Parliament for the Borough of Southwark, to Mr. John Belchier, F. R. S. on Mr. DEBRAW's Improvements in the Culture of Bees*^(a).

DEAR SIR,

Southwark,
October 11, 1779.

Read Jan. 22,
1778.

MR. DEBRAW's paper on bees, which you was so obliging as to procure me, has afforded me much pleasure. As a farther discovery of the nature and operations of these wonderful insects, it is a matter of great curiosity, and must have been an high entertainment to the naturalist who has made them the object of his attention; but with me, the merit of his publication does not end here: his discoveries, if properly pursued, may be of considerable public utility; those who cultivate bees for profit will now be able to increase the number of their stocks at pleasure, by adopting his method of compelling the commons to produce a queen. That the working bees should be capable of forming a queen in the manner he describes, I own at first staggered my belief; and although the experiments

(a) See Philosophical Transactions, vol. LXVII. p. 15.

appeared to be decisive, yet, as the whole depended on his veracity, I could not be satisfied without making him a visit. I found him modest, sensible, and communicative, and have had as much ocular proof as the season of the year would admit. In short, I am convinced of the fact, but not less at a loss to account for it.

The next discovery is the use of the drones: every one who has written on the subject has given some opinion concerning them, but all very unsatisfactory. Many have acknowledged their ignorance; and some have absolutely pronounced them useless, and recommended their being destroyed, to prevent an unnecessary waste of honey: even BUTLER, in his *Feminine Monarchy, or History of Bees*, which he calls a book written from experience, describes a drone-trap, which he recommends to be used for that purpose: and it is at this time so general an opinion amongst the bee-masters in this kingdom, that I am persuaded, nothing but the trouble and difficulty of catching them prevents many from ruining their stocks of bees by this means: I speak now from knowledge; some years since I lost a strong colony by giving the experiment a fair trial.

I can also confirm his account of the existence of drones no larger than the common bees, having by

accident discovered them last Midsummer in one of my boxes; DEBRAW says, the reason of this difference in the size of drones he fears must remain among the arcana of nature; but I will venture a conjecture from the general œconomy of those creatures. The large drones consume a great quantity of food, and, as soon as the breeding season is over, are all destroyed by the working bees, evidently to avoid the expence of keeping them: and they do not appear again till the middle of April, when honey is plenty; though the breeding begins in March, or, if the spring be forward, the latter end of February: from hence I think it may fairly be concluded, that the small drones are preferred to impregnate the eggs in spring, in preference to the large ones, because they devour less honey; and this is no inconsiderable object, few hives being so well provided as to have much to spare at that season.

The only thing wanting to introduce Mr. DEBRAW's discoveries to general practice is, to contrive a method of making his experiments so easy, and with so little danger from the stings of the bees, as may recommend it to little farmers and cottagers in the country. This I shall endeavour to do next summer, and am not without hopes of succeeding: this once effected, every poor man,
who

who has room enough in his garden to place twenty hives, may reasonably expect a profit of at least ten pounds a year, with very little trouble and without any expence.

I am, &c.

